

10/566686

Express Mail Mailing Label No. EV 630986212 US

PATENT

Attorney Docket No. MIT-166  
IAP2004-01/PTO 31 JAN 2006

Particulars of prior application:

International Serial No.: PCT/US2004/024747

International Filing Date: July 29, 2004

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

APPLICANT(S): Liu *et al.*  
SERIAL NO.: Not yet assigned      GROUP NO.: Not yet assigned  
FILING DATE: Herewith      EXAMINER: Not yet assigned  
TITLE: METHOD AND STRUCTURE OF STRAIN CONTROL OF SIGE  
BASED PHOTODETECTORS AND MODULATORS

Mail Stop PCT  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**INFORMATION DISCLOSURE STATEMENT**

Sir:

In accordance with the provisions of 37 C.F.R. 1.97 and 1.98, Applicants hereby make of record the patents and publications listed on the accompanying Form PTO-1449, and other information contained herein, for consideration by the Examiner in connection with the examination of the above-identified patent application. In accordance with the U.S. Patent Office's partial waiver of the requirement under 37 C.F.R. 1.98(a)(2)(i), only copies of the foreign patents and non-patent publications are enclosed.

**REMARKS**

In accordance with the provisions of 37 C.F.R. 1.97, this statement is being filed (CHECK ONE):

- ☒ (1) within three (3) months of the **filing date** of a national application other than a continued prosecution application under 37 C.F.R. 1.53(d), or within three (3) months of the **date of entry of the national stage** as set forth in 37 C.F.R. 1.491 in an international application, or before the mailing of the **first Office action** on the merits, or before the mailing of a **first Office action** after the filing of a request for continued examination under 37 C.F.R. 1.114; or
- ☐ (2) after the period defined in (1) but before the mailing date of a **final action** or a **notice of allowance** under 37 C.F.R. 1.311, and
- ☐ the requisite Statement is below, **OR**

10/566686

IAP20 Rec'd PCT/PTO 31 JAN 2006

- ☐ the requisite fee under 37 C.F.R. 1.17(p), namely \$180.00, is included herein, or
- ☐ (3) after the mailing date of a **final action** or **notice of allowance** but before the payment of the **issue fee**, AND
- ☐ the requisite Statement is below, AND
- ☐ the requisite petition fee under 37 C.F.R. 1.17(p), namely \$180.00 is included herein.

It is respectfully requested that each of the patents and publications listed on the attached Form PTO-1449, and other information contained herein, be made of record in this application.

#### STATEMENT

As required under 37 C.F.R. 1.97(e), Applicant(s), through the undersigned, hereby state either that:

- ☐ 1. Each item of information contained in the Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application **not more than three months** prior to the filing of the Information Disclosure Statement; or
- ☐ 2. No item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing this Statement after making reasonable inquiry, no item of information contained in the Information Disclosure Statement was known to **any individual** designated in 37 C.F.R. 1.56(c) **more than three months** prior to the filing of the Information Disclosure Statement.

Respectfully submitted,



Natasha C. Us  
Attorney for Applicant(s)  
Goodwin Procter LLP  
Exchange Place  
Boston, Massachusetts 02109  
Customer No. 051414

Date: Jan. 31, 2006  
Reg. No. 44,381

Tel. No.: (617) 570-1806  
Fax No.: (617) 523-1231  
VER 12/00

10/566888

EXPRESS MAIL MAILING LABEL

NO. EY63098622US

IAP20 Rec'd PGT/PTO 31 JAN 2006 SHEET 1 OF 1

|  |    |  |            |                                 |                 |              |                |                               |                          |
|--|----|--|------------|---------------------------------|-----------------|--------------|----------------|-------------------------------|--------------------------|
| FORM PTO - 1449  |    |  |            | ATTORNEY DOCKET NO.: MIT-166    |                 |              |                |                               |                          |
| INFORMATION DISCLOSURE STATEMENT   |    |  |            | APPLICANT(S): Liu <i>et al.</i> |                 |              |                |                               |                          |
|  |    |  |            | SERIAL NO.: Not Yet Assigned    |                 |              |                |                               |                          |
|  |    |  |            | FILING DATE: Herewith           |                 |              |                |                               |                          |
|  |    |  |            | GROUP: Not Yet Assigned         |                 |              |                |                               |                          |
| U.S. PATENT DOCUMENTS  |    |  |            |                                 |                 |              |                |                               |                          |
| EXAM.<br>INIT.   |    | DOCUMENT<br>NUMBER   | DATE       | NAME                            |                 | CLASS        | SUB<br>CLASS   | FILING DATE IF<br>APPROPRIATE |                          |
|  |    |  |            |                                 |                 |              |                |                               |                          |
|  |    |  |            |                                 |                 |              |                |                               |                          |
|  |    |  |            |                                 |                 |              |                |                               |                          |
| FOREIGN PATENT DOCUMENTS   |    |  |            |                                 |                 |              |                |                               |                          |
| EXAM.<br>INIT.   |    | DOCUMENT<br>NUMBER   | DATE       | COUNTRY<br>CODE                 | CLASS           | SUB<br>CLASS | FILING<br>DATE | ABSTRACT<br>ONLY              | ENGLISH<br>LANG<br>(Y/N) |
|  | B1 | WO 03/105189   | 12/18/2003 | WO                              |                 |              |                |                               |                          |
|  | B2 | WO 04/001857   | 12/31/2003 | WO                              |                 |              |                |                               |                          |
| OTHER DOCUMENTS: (Including Author, Title, Date, Relevant Pages, Place of Publication) |    |  |            |                                 |                 |              |                |                               |                          |
|  | C1 | Boyanov, et al., "Growth of epitaxial CoSi <sub>2</sub> on SiGe (001)", <u>Journal of Applied Physics</u> , American Institute of Physics. New York, US. 86(3):1355-1362 (1999).   |            |                                 |                 |              |                |                               |                          |
|  | C2 | Buchal et al., "Ultrafast Si-based MSM mesa photodetectors with optical waveguide connection," <u>Materials Science in Semiconductor Processing</u> , 3:399-403 (2000). XP001205581  |            |                                 |                 |              |                |                               |                          |
|  | C3 | Steege et al., "Silicide-induced stress in Si: origin and consequences for MOS technologies," <u>Materials Science and Engineering R: Reports</u> , Elsevier Sequoia S.A., Lausanne, CH. 38(1):1-53 (2002).  |            |                                 |                 |              |                |                               |                          |
|  | C4 | Yodo et al., "Influences of off-angle and off-direction of substrate on crystalline quality of GaAs and Ge heteroepitaxial films grown on vicinal Si (110) substrates by molecular-beam epitaxy", <u>Journal of Crystal Growth</u> . North-Holland Publishing Co., Amsterdam, NL. 209(4):724-733 (2000). XP004198396 |            |                                 |                 |              |                |                               |                          |
|  | C5 | International Search Report for PCT/US2004/024747 dated March 22, 2005.  |            |                                 |                 |              |                |                               |                          |
| EXAMINER   |    |  |            |                                 | DATE CONSIDERED |              |                |                               |                          |